



LAND PLANNING, INC.

Civil Engineers • Land Surveyors • Environmental Consultants

December 3, 2021

Grafton Conservation Commission
Grafton Municipal Center
30 Providence Road
Grafton, MA 01519

Attention: Leah Cameron, Agent
Subject: Submission of revised septic design plans
Reference: Lee Robinson, lots 3 and 4, Upton Street

Dear Leah:

Please find enclosed one copy of our revised septic design plans for lots 3 and 4. The changes made are as follows:

- On lots 3 and 4, we moved the stockpile area out of the buffer zone, and we added the upland area for both lots.
- On Lot 3 we moved the proposed siltation controls out of the 25 foot no disturb zone.

Also, find enclosed two checks for \$50.00, one for Lot 3 and one for Lot 4 for the additional Town Wetland Bylaw fees.

Please contact me if you have any questions or require any additional information.

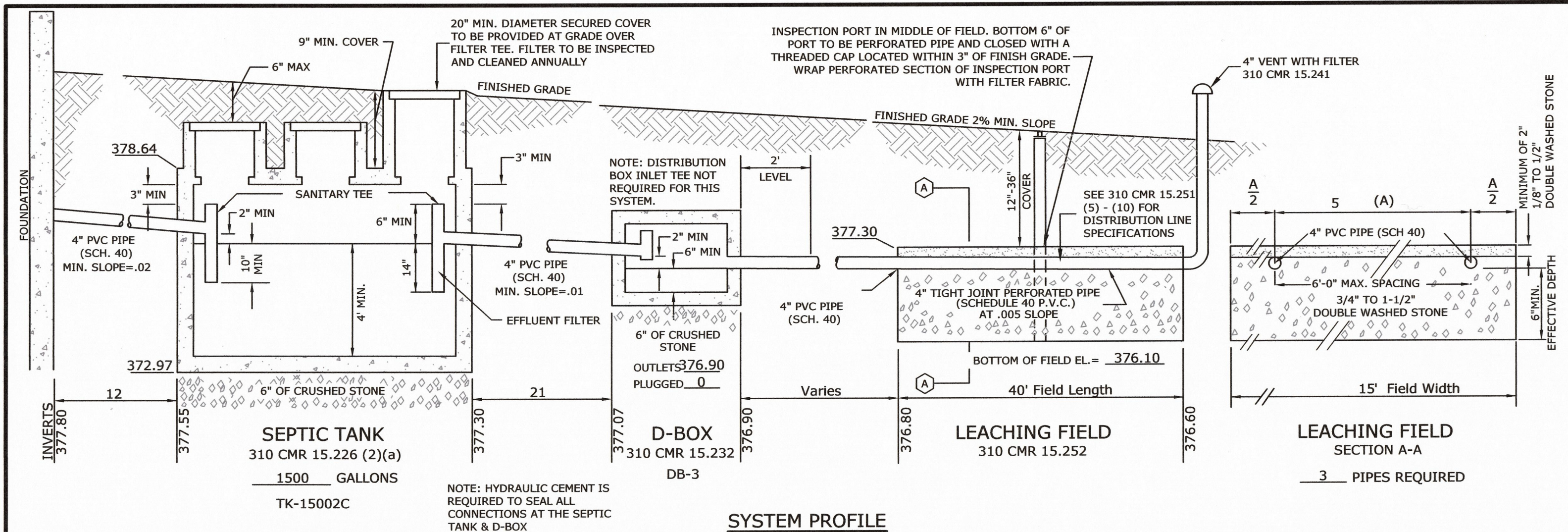
Sincerely,
Land Planning Incorporated.

Norman G. Hill, P.E., P.L.S.

214 Worcester Street
North Grafton, MA 01536
Tel: 508-839-9526
Fax: 508-839-9528

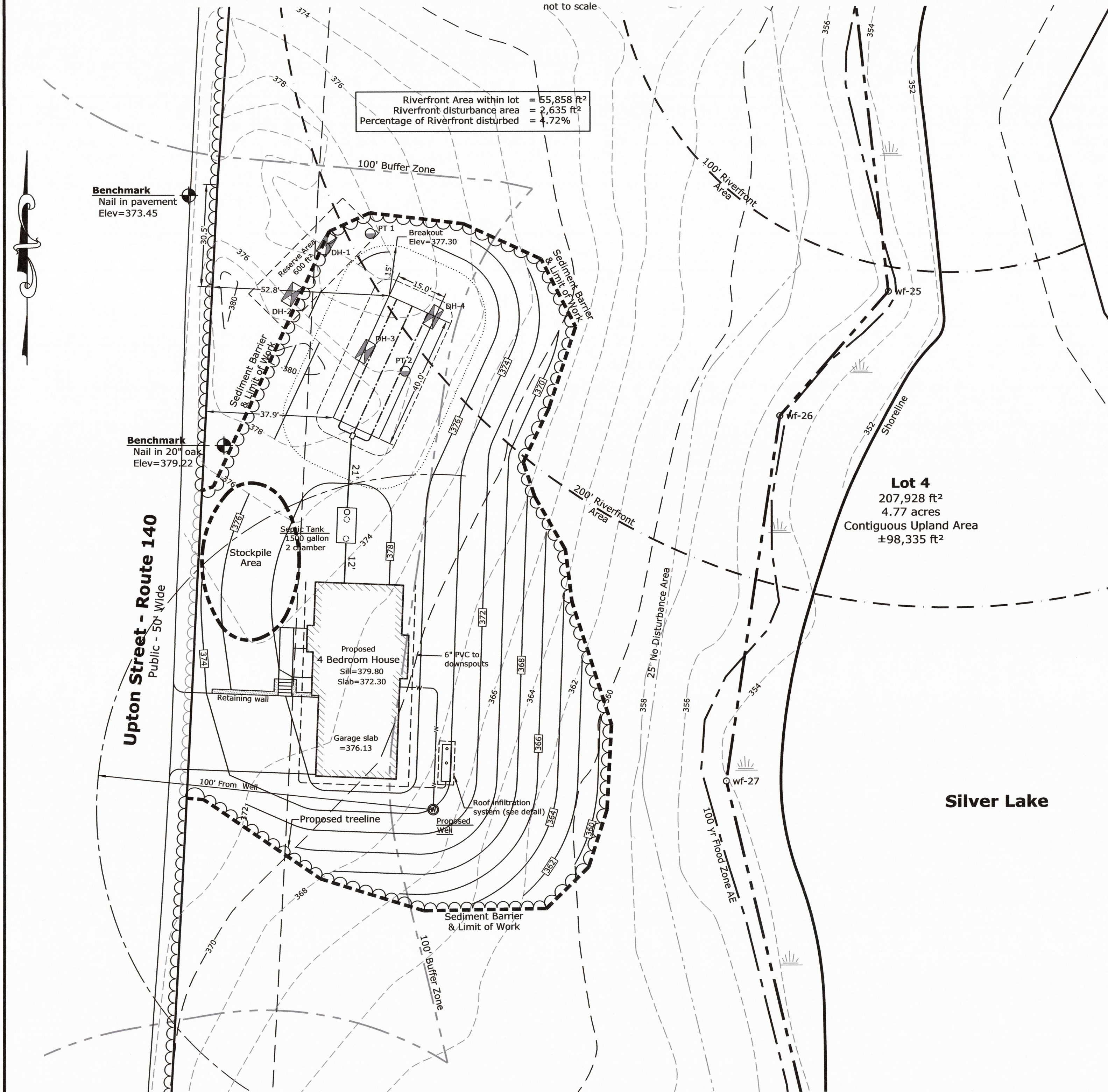
167 Hartford Avenue
Bellingham, MA 02019
Tel: 508-966-4130
Fax: 508-966-5054

1115 Main Street
Hanson, MA 02341
Tel: 781-294-4144
Fax: 781-293-4111



SYSTEM PROFILE

not to scale



SYSTEM PLAN

Scale: 1" = 20'

Schedule of Elevations				
Component	Model	Elevation	Diameter	Description
Foundation	TK-15002C	377.80	4"	Building sewer invert
		377.55	4"	Septic tank inlet invert
		377.30	4"	Septic tank outlet invert
D-Box	DB-3	377.07	4"	D-box inlet invert
		376.90	4"	D-box outlet invert
		376.80	4"	Field begin invert
Leaching Field		376.60	4"	Field end invert
		376.10	4"	Field bottom
		377.30	4"	Field top

Design Flow Calculation:

Type of facility: Single family residence
Number of bedrooms: 4
Daily flow rate: 110 gpd/bedroom
Design flow: 440 gpd

Required Leaching Area Calculation:

Soil class: Class I
Percolation rate: 5 min/inch
Effluent loading: 0.74 gpd/ft²
Required leaching area: $\frac{440 \text{ gpd}}{0.74 \text{ gpd/ft}^2} = 595 \text{ ft}^2$
0.74 gpd/ft²

Leaching area provided = 15 ft x 40 ft = 600 ft²

600 ft² > 595 ft², Use 15 ft x 40 ft field

Septic Tank Requirements:

200% of design flow, 1,500 gallon minimum
(2)(440 gpd) = 1500 gallons

1500 gal <= 1500 gal: Use 1500 gallon tank

Project Specific Notes

- Garbage disposal units are prohibited.
- No water softener shall discharge to the septic system.
- The proposed septic system is not located within a Zone II Approved Wellhead Protection Area.
- All known wells located within 200 feet of the proposed system have been shown on the locus plan.
- This property is located within the "Miscoe, Warren and Whitehall Watersheds ACEC."

General Notes

- All elevations refer to NAVD 88 datum. See plan for benchmark locations.
- All construction shall conform to 310 CMR 15.00, Title 5.
- This plan does not warrant or imply any subsurface soil conditions other than those observed at the immediate test pit locations. If unsuitable material is encountered, all construction shall cease, and the design engineer shall be contacted immediately.
- All tanks and chambers shall be set level and true to grade on a mechanically compacted stable base of 6" of 3/4" stone.
- Areas disturbed during construction shall be stabilized to minimize erosion and control sedimentation. The area over the system shall be graded to a minimum of 2% slope to provide positive surface drainage. Place 4" Loam and seed all disturbed areas of the project not otherwise improved.
- This plan shall not be used for the reproduction of property lines, nor shall it be used as a mortgage plot plan or title survey. Conformance to local bylaws shall be determined by the owner prior to construction.
- For proper performance, the septic tank should be pumped on an as needed basis, but in no event shall the septic tank be pumped less than every three years.
- Any alterations must be reported to the design engineer prior to proceeding with construction.
- The system must be inspected by the Board of Health or its agent and be certified by the design engineer.
- Conservation Commission approval may be required.
- See 310 CMR 15.255 for fill specifications. See 310 CMR 15.247 for aggregate specifications.
- All piping shall be marked with magnetic marking tape
- All trenches for utilities to be backfilled and compacted with granular materials free of rocks larger than 2".
- All underground utility locations shown are based on field evidence and records provided to Land Planning, Inc.. These locations should be considered approximate. Other utilities may exist which are not evident or for which record information was not found. The contractor must contact all utility companies and "Dig Safe" before excavation begins. We assume no responsibility for damages incurred as a result of utilities omitted or inaccurately shown.
- It is the responsibility of the contractor to review all of the drawings and specifications associated with this project work and project scope prior to the initiation of construction. Should the contractor find a conflict with the documents, relative to the specifications or applicable codes, it is the contractor's responsibility to notify the project engineer of record in writing prior to the start of construction. Failure by the contractor to notify the project engineer shall constitute acceptance of full responsibility by the contractor to complete the scope of work as defined by the drawings and in full conformance with local regulations and codes.
- Contractor is responsible for all excavation to be performed in accordance with current O.S.H.A. standards, as well as additional provisions to assure stability of contiguous structures, as field conditions dictate.

On-Site Sewage Disposal System

Located At
Lot 4
183 Upton Street
Assessors Parcel 86-0-11
Grafton, MA
Owned By
Roger Lee Robinson

115 Old Upton Rd
Grafton, MA

9/15/2021

Scale: As Noted

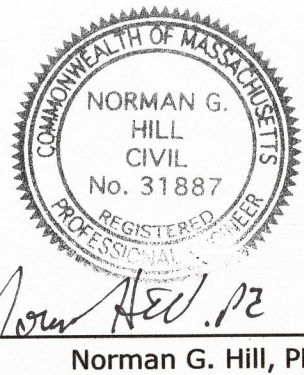
Legend

	Catch Basin
	Drain Manhole
	Proposed Contour
	Proposed Spot Grade
	Existing Contour
	Utility Pole
	Water Gate Valve
	Hydrant
	Soil Test Pit
	Well
	STONE WALL
	TREE LINE

Soil Evaluator Note:

I certify that I am currently approved by the Department of Environmental Protection to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise, and experience described in 310 cmr 15.018(2).

Norm Hill, PE Date: 12-7-21
Soil Evaluator, SE #



Norm Hill, PE Date: 12-7-21
Norman G. Hill, PE #31887

REVISIONS

No.	Date	Design	Checked
1	10/19/21	MHG	NGH
2	10/25/21	MHG	NGH
3	11/16/21	MHG	NGH
4	12/3/21	MHG	NGH
5			
6			

Field By:

Designed By: MHG 9/21

Drawn By: MHG 9/21

Checked By: NGH 9/21



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Date	9/15/2021	Sheet No.	1 of 2
Job No.	G9541		